

This is a  
**CONTROLLED DOCUMENT**  
EG&G - ROCKY FLATS PLANT  
ENVIRONMENTAL MANAGEMENT

~~THIS IS A REF ID: A60~~  
**ROCKY FLATS PLANT  
EMD OPERATING  
PROCEDURES MANUAL**

**Manual No.: 5-21000-OPS-SW**  
**Procedure No : Table of Contents, Rev 7**  
**Page: 1 of 2**  
**Effective Date: 09/30/92**  
**Organization: Environmental Management**

**THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES:**

**VOLUME I: FIELD OPERATIONS (FO)**  
**VOLUME II: GROUNDWATER (GW)**  
**VOLUME III: GEOTECHNICAL (GT)**  
**VOLUME IV: SURFACE WATER (SW)**  
**VOLUME V: ECOLOGY (EE)**  
**VOLUME VI: AIR (AP)**

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SW 07	Collection of Tap Water Samples	2	05/12/92

**ADMIN RECORD**

REVIEWED FOR CLASSIFICATION/LCN:

By

Date

**DOCUMENT CLASSIFICATION REVIEW WAIVER  
PER R B. HOFFMAN, CLASSIFICATION OFFICE  
JUNE 11, 1991**

A-SW-001178

**ROCKY FLATS PLANT  
EMD OPERATING  
PROCEDURES MANUAL**

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SW 11	Operation and Maintenance of Stream-Gaging and Sampling Stations	1	02/20/92
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DCN 92 01	Reduction in Unrequired Quality Check	2	07/21/92
SW 13	Bacteriological Water Sampling	2	05/12/92
SW 14	Automatic Sampling		To Be Added
SW 15	River and Ditch Sampling	2	05/12/92
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SW 29	Dye Testing Building Drains	0	09/29/92
SW 30	Field Locating Chemicals of Concern	0	09/25/92
SW 33	Dye Testing Foundation Footing Drains	0	09/29/92

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EG&G - ROCKY FLATS PLANT  
ENVIRONMENTAL MANAGEMENT

This is a RED Stamp

**DYE TESTING FOUNDATION FOOTING DRAINS**

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EM OPERATIONS	Procedure No:	SW.33, Rev 0
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CATEGORY 2	Organization:	SWD

TITLE:  
DYE TESTING  
FOUNDATION/FOOTING DRAINS

Approved By:

George H. Schlock 9/29/92  
Manager, Surface Water Division Date

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**ADMIN RECORD**

REVIEWED FOR CLASSIFICATION/UCNI

By [Signature]  
Date 10/8/92 [Signature]

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## DYE TESTING FOUNDATION FOOTING DRAINS

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### 1. PURPOSE

The purpose of this procedure is to provide instructions for Dye Testing Foundation drains at the Rocky Flats Plant (RFP) to ensure that hazardous or otherwise inappropriate substances at Rocky Flats Plant cannot inadvertently enter the Sanitary Sewer (SS) system.

### 2. SCOPE

This procedure implements the Dye Testing of Foundation drains at RFP to detect the potential for a cross connection with the Sanitary Sewer system.

This procedure addresses the visual detection of dye at selected manholes, the 990 Diversion Box, and the anticipated Foundation drain Flow Termination Point (FTP).

### 3. REFERENCES

#### 3.1 Primary References

- 3.1.1 Dye Testing Health and Safety Plan
- 3.1.2 RFP Engineering Document Control Facilities Engineering Drawings
- 3.1.3 RFP Foundation Drain Report
- 3.1.4 RFP Training Users Manual 1-10000-TUM
- 3.1.5 RFP EM/SWD 3-21000-ADM-17.01, QA Records Management.

#### 3.2 Secondary References

- 3.2.1 NPDES FFCA Chromic Acid Incident plan
- 3.2.2 DEPARTMENT OF ENERGY (DOE) ORDERS:
  - a. DOE Order 5480.4 Environmental Protection, Safety and Health Protection Standards

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**b. DOE Order 6430.1A General Design Criteria**

- ° Section 1300-8 Special Facilities - Waste Management
- ° Section 1300-9 Special Facilities - Effluent Control and Monitoring
- ° Section 1323-5 Special Facilities - radioactive Liquid Waste Facilities

**3.2.3 ENVIRONMENTAL PROTECTION AGENCY (EPA) REGULATIONS:**

- a. 40 CFR 122 National Pollution Discharge Elimination System Permit Regulations
- b. 40 CFR 131 Procedures for Approving State Water Quality Standards

**3.2.4 COLORADO WATER QUALITY CONTROL ACT:**

- a. CRS 35-8 Colorado Water Quality Control Act
- b. 5 CCR 1002 - Regulations for the State Discharge Permit System

**3.2.5 Conduct of Engineering Manual**

- a. Section 6.7
- b. DES-19
- c. DES-68A

**4. LIMITATIONS AND PRECAUTIONS**

- 4.1 Personnel in the vicinity of an open manhole or 990 Diversion Box shall consider the potential hazards (e.g., confined space entries, rising & falling water) and not put themselves or others at undue risk.

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### 5. PREREQUISITES

- 5.1 Personnel shall read and understand the Dye Testing Health and Safety plan.
- 5.2 Personnel shall be current on all training required, per the Training Users Manual, 1-10000-TUM, to perform the tasks described in this procedure.
- 5.3 Personnel shall be aware of and perform all requirements (i.e., Work Permits, Plan of the Day, appropriate notification, etc.) prior to entering a building or area.

### 6. INSTRUCTIONS

#### 6.1 Preparation

- 6.1.1 Obtain copies of engineering reference Drawings (Floor Plans, Site Utilities Plans, Plumbing, Sanitary Sewer, and Foundation drawings) from Engineering Document Control (building 130), the building representative, or other sources.
- 6.1.2 Obtain access to copies of the SWD Foundation Drain Report, the SWD approved "Baseline" time for the building (if established), and investigate the potential for historical data sources which may be helpful in location foundation drains.
- 6.1.3 Using information gathered in Sections 6.1.1 through 6.1.2, propose the location of the Foundation Drain, and a feasible access point.
- 6.1.4 Using the information gathered in Sections 6.1.1 through 6.1.2 consider if the Foundation drain is pumped or is gravity flow and determine a feasible Flow Termination Point.
- 6.1.5 Using the Site Utilities Plan and the Location Map (Appendix 7), identify the down gradient manhole(s) (if any), associated with the building Sanitary Sewer System and/or Foundation Drain to be dye tested.

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- 6.1.6 Field walk down the area to verify determinations made in Sections 6.1.3 through 6.1.5.
- 6.1.7 Obtain Dye Test Ready Review Sheets (Appendix 3), Dye Test Log Sheets (Appendix 1), and Dye Sighting (DS) Log Sheets (Appendix 2) from RFP Forms Control.
- 6.1.8 Complete the Dye Test Ready Review Sheet (Appendix 3) including the appropriate notifications.
- 6.1.9 Obtain Dye Test Log Sheet (Appendix 2) and Dye Sighting (DS) Log Sheet (Appendix 3) forms from RFP Forms Control.
- 6.1.10 Obtain materials listed in Appendix 4.
- 6.1.11 Take appropriate actions to gain access to the building to be dye tested and the dye sighting areas.
- 6.1.12 Establish a source of water and the most reasonable method of transportation (e.g., hose, bucket, etc) available to transport water to the dye injection sites.
- 6.1.13 Station Dye Spotters at the down gradient manhole and/or at the 990 Diversion Box to visually inspect the sanitary waste water for color changes indicating the presence of dye.
- 6.1.14 If an SWD approved "Baseline" time does not exist, then establish a "Baseline" time for the building as instructed in Section 6.2 .

### **6.2 Establish a "Baseline" Time**

- 6.2.1 Using information gathered in Sections 6.1.1 through 6.1.2, locate a known SS drain (Toilet, sink, etc.) furthest from the main drain lines exit point from the building.



# **DYE TESTING FOUNDATION FOOTING DRAINS**

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6.2.2 Mix one tablespoon of FD&C red dye 40 with 5 gallons of water until all granules have dissolved (Dye Concentrate).

6.2.3 Inject dye into the drain(s) as follows:

6.2.3.1 For toilets

a. Dispense 1 tablespoon of FD&C red dye 40 (Appendix 6) directly into the toilet(s).

b. Flush toilet at least 5 times ensuring that all dry granules are flushed into and down the drain with the water.

6.2.3.2 For building drains (sinks, floor drains, etc.)

a. Pour 1 to 2 pints of concentrate into a drain.

b. Flush with a minimum of 20 gallons of water.

6.2.4 Document the time of dye injection on the Dye Test Log Sheet and alert the Dye Spotters, by radio, to start watching for dye traces at the Dye Sighting locations (See Section 6.4).

6.2.5 After receiving notification from the Dye Spotter(s) that dye has been detected, document the time(s) and location(s) on the Dye Test Log Sheet.

6.2.6 Note the total time it took for dye to reach each location on the Dye Test Log Sheet under comments.

## **NOTE**

This duration becomes the suggested "baseline" for flow to go from the building to the SS dye spotting locations. The baseline is only a guideline. Experienced judgement shall be required in making determinations based on this factor.

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- 6.2.7 Allow twice the "baseline" time to pass before injecting dye into a Foundation drain.

## 6.3 Dye Testing a Foundation Drain

- 6.3.1 Establish a "Baseline" time for the building as instructed in Section 6.2 or use an SWD approved previously established "Baseline" time.
- 6.3.2 Mix one tablespoon of FD&C red dye 40 with 5 gallons of water until all granules have dissolved (Dye Concentrate).
- 6.3.3 Pour 1 to 5 gallons of concentrate into the Foundation Drain access point.

### NOTE

If access point is at a manhole follow the instructions in Sections 6.4.1.1 prior to injecting dye.

- 6.3.4 Document the time of dye injection on the Dye Test Log Sheet and alert the Dye Spotters, by radio, to start watching for dye traces at the Dye Sighting locations (See Section 6.4).
- 6.3.5 Flush access point with water until:
- 6.3.5.1 the water reaches a level of pump discharge (when applicable), or
  - 6.3.5.2 the anticipated FTP begins discharging traces of dye, or
  - 6.3.5.3 a Dye Spotter reports a sighting, or
  - 6.3.5.4 at least twice the "Baseline" time has passed.
- 6.3.6 Document the time(s) and location(s) of all dye sightings on the Dye Test Log Sheet.

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6.3.6.1 If dye is not detected at the SS Dye Spotting locations or the anticipated FTP within twice the "baseline" time, then the drain may be documented as not going to the SS but further investigation of the FTP and a re-Dye Testing is recommended.

6.3.6.2 If dye does appear at a SS Dye Spotting location, then the drains must be documented as going to the SS.

### NOTE

After injecting dye into a Foundation drain, allow the dye at least twice the "baseline" time to reach one of the officially designated dye sighting location(s) before Dye Testing in another building.

6.3.7 Sign Dye Test Log Sheets, at the end of each day.

## 6.4 Dye Sighting

Read and understand the Dye Test Health & Safety Plan.

### NOTE

The Dye Injector shall send notification, by radio, to all Dye Spotters at the time the dye is injected. If a color, other than red, should appear at the Sanitary Sewer while dye testing a drain or a series of drains, then all discharging to the SS system is to be discontinued for two (2) hours and that drain is to be re-dye tested or, the drain is to be treated as Sanitary Sewer.

### 6.4.1 Manhole Dye Sighting Location

#### WARNING

DO NOT ENTER THE MANHOLE AND USE EXTREME CAUTION WHEN REMOVING THE MANHOLE COVER!

6.4.1.1 Remove the cover on each manhole and Test for gasses following the Health & Safety Plan.

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- 6.4.1.2 Stand above the manhole while lowering the Backdrop Extension (See Appendix 5) down into the flow of water.
- 6.4.1.3 Upon receiving notification from the Dye Injector that dye has been introduced into the system, shine a high intensity light down on the face of the white backdrop and watch for the dye to appear in the stream of water for twice the "Baseline" time.
- 6.4.1.4 Notify the Dye Injector by radio immediately upon sighting dye.
- 6.4.1.5 Document the date, time and location of each sighting on a DS Log Sheet.
- 6.4.1.6 Repeat steps 6.4.1.2 through 6.4.1.5 for each dye sighting at that location.
- 6.4.1.7 Sign each DS Log Sheets, at the end of the day.

## 6.4.2 990 Diversion Box Dye Sighting Location

### WARNING

DO NOT ENTER THE MANHOLE AND USE EXTREME CAUTION WHEN REMOVING THE GRILLE ON THE 990 DIVERSION BOX.

- 6.4.2.1 Remove grating from 990 Diversion Box following the Dye Test Health & Safety Plan.
- 6.4.2.2 Stand above the 990 Diversion Box on the fall side while lowering the Backdrop Extension (See appendix 5) down into the flow of water.

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- 6.4.2.3 Upon receiving notification from the Dye Injector that dye has been introduced into the system, shine a high intensity light down on the face of the white backdrop and watch for the red dye to appear in the stream of water crossing over it for twice the "Baseline" time.
- 6.4.2.4 Notify the Dye Injector by radio immediately upon sighting dye.
- 6.4.2.5 Document the date, time and location of each sighting, on the DS Log Sheet.
- 6.4.2.6 Repeat steps 6.4.2.1 through 6.4.2.5 for each required dye sighting at that location.
- 6.4.2.7 Sign each DS Log Sheets, at the end of the day.

## 6.4.3 Anticipated Flow Termination Point Dye Spotting Location

- 6.4.3.1 Establish a safe location above the FTP for visual inspection of the water flow.
- 6.4.3.2 Upon receiving notification from the Dye Injector that dye has been introduced into the system, watch for the red dye to appear in the stream of water for twice the "Baseline" time.
- 6.4.3.3 Notify the Dye Injector by radio immediately upon sighting dye.
- 6.4.3.4 Document the date, time and location of each sighting on a DS Log Sheet.
- 6.4.3.5 Repeat steps 6.4.3.1 through 6.4.3.4 for each dye sighting at that location.
- 6.4.3.6 Sign each DS Log Sheets, at the end of the day.

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### **6.5 Review Documents**

- 6.5.1 Review the Dye Test and DS Log Sheets for consistency and completeness.
- 6.5.2 Revise or reconstruct the Dye Test and Dye Sighting Log Sheets for consistency and neatness.

### **6.6 Finalize Documents**

- 6.6.1 Sign and date all Dye Test and DS Log Sheets.
- 6.6.2 Send log sheets to RFP EMD Records Center to be filed under the appropriate section of the DIS Master Log Book.

## **7. RECORDS**

The log sheets are quality records and the originals shall be submitted to the EMD Records Center per 3-21000-ADM-17.01, Quality Records Management, for inclusion in the DIS Master Log Book.

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## APPENDIX 1 Dye Test Log Sheet DYE TEST LOG SHEET

BUILDING # \_\_\_\_\_

ROOM #	RISK AREA	TEST DATE	DRAIN TYPE	INJEC TIME	VERIF TIME	RESULTS SS / PW	COMMENTS/RECOMMENDATION
	N/A		*TEST				

\* This known sanitary drain was tested to establish the time required for the tracer dye to enter the diversion box at building 990.

DYE TESTED BY \_\_\_\_\_  
856D0181.005

WITNESSED BY \_\_\_\_\_

Signed

Dated

Signed

Dated

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**DYE SIGHTING LOG SHEET**  
**(DS)**

Dye Spotter \_\_\_\_\_  
(please print name)

[illegible]

856D0181.005



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**APPENDIX 3  
Dye Test Ready Review Sheet and Contact List**

**DYE TEST  
READY REVIEW SHEET**

BUILDING# \_\_\_\_\_

SECURITY CLEARANCE REQUIRED	YES	NO	
TRAINING REQUIREMENTS COMPLETE	YES	NO	
ON PLAN OF THE DAY	YES	NO	NOT REQ
WORK PERMIT	YES	NO	NOT REQ

**CONTACT LIST**

Contact each group or individual giving them  
24 Hours Notice & 1 Hour Notice

	<u>EXT</u>	<u>PAGE</u>	<u>DATE</u>
BUILDING OPERATIONS MANAGER	X_____	D_____	_____
BUILDING H&S AREA ENGINEER	X_____	D_____	_____
BUILDING LO/TO MANAGER	X_____	D_____	_____
PLANT PROTECTION	X2464		_____
WALKIE-TALKIE (to get walkie-talkies)	X6429		_____
RCRA/CERCLA - ALLEN SHUBERT	X5251	D1177	_____
WASTE WATER TREATMENT PLANT (WWTP) - FRANK HUFFMAN	X4502	D3112	_____
WASTE OPERATIONS MANAGER - BOB MORGAN	X6013	D1855	_____
SURFACE WATER DIVISION (SWD) - BOB FIEHWEG	X8542	D3132	_____

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**APPENDIX 4  
Work Materials List**

**WORK MATERIALS**

Prior to Dye Testing, the following items must be obtained:

- Dye Test Ready Review Sheet and Contact List
- Engineering Sewer Drawings (copies)
- Drain Location Sketch(s) (copies)
- FD&C Red #40 dye and a one tablespoon measuring devise.
- Water supply must be located
- 5 gallon bucket
- 1 gallon container
- Ready made drain covers
- Four radios set at the same frequency and approved by Security
- High-power flashlight
- Dye Test Log Sheets
- Dye Sighting (DS) Log Sheets
- Writing Surface (Clipboard)
- Writing Instruments
- Protective Clothing (Coveralls, latex gloves, etc.)
- HNu or OVA Meter
- LEL/O<sub>2</sub> Meter
- Backdrop Extension (may be checked out from Surface Water Division of Environmental Management)

DYE TESTING FOUNDATION FOOTING DRAINS

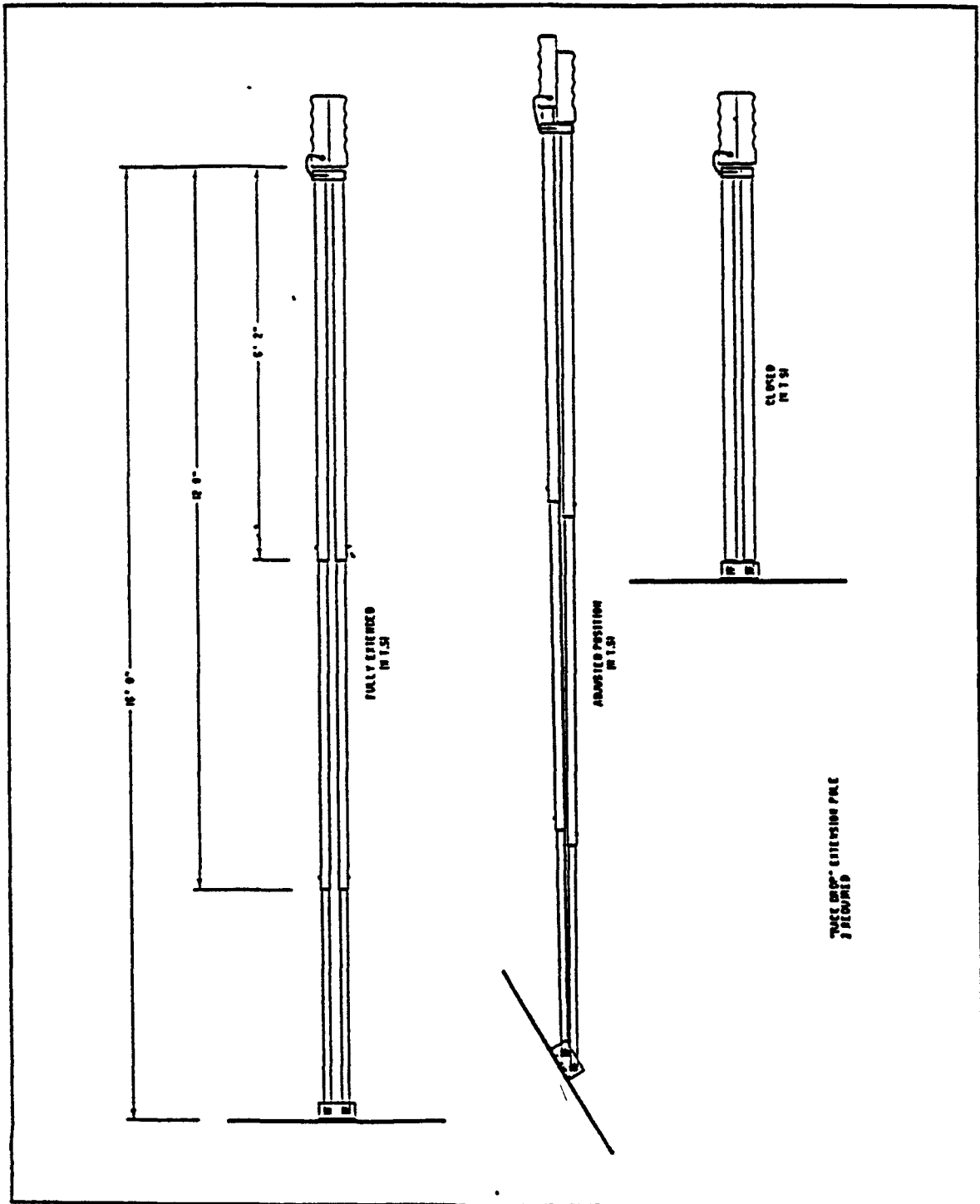
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APPENDIX 5  
Backdrop Extension



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**APPENDIX 6**

**Tracer Dye Material Safety Data Sheen (MSDS)  
and Engineering Letter of Approval**

**Internal Letter**



**Rockwell International**

Date September 20, 1989

No 8.79

TO (Name, Organization, Internal Address)

FROM (Name, Organization, Internal Address, Phone)

Those Listed

D. W. Walker  
Plant Utilities Eng.  
Building 130  
5450 (dig. pager 320)

SUBJECT TRACER DYE INJECTION IN BUILDING DRAIN SYSTEMS

Under current project Authorization No. 492249 - Drains Identification Study, Facilities Engineering personnel will be injecting tracer dye into the process drains in the buildings which are connected or suspected to be connected to the process waste lines. This tracer dye test will provide a positive identification of the drain connections and will identify if there are cross connections between the process waste line(s) and the sanitary waste line(s)

The test will be conducted using an Industrial Hygiene recommender FD&C Red 40 dye. The Material Safety Data Sheet (MSDS) for this dye is on file in the Industrial Hygiene office and is attached. The dye is a dark red dye used for food, drug and cosmetic which is not a hazardous material and has no known significant harmful environmental effect. The dye will be mixed in water to produce a dark red solution. Approximately 1 - 2 gallons of this solution will be injected into the process drain followed by approximately 2 - 3 gallons of clear water. Facilities Engineering personnel will be observing the outcome of the drain lines at various locations in the building drain system. No sealed drains in areas containing radioactive or other hazardous materials will be opened.

The tracer dye test will be conducted for all buildings on plant site which have process drains. The test is tentatively scheduled to begin on September 25, 1989, and will continue through May 1990. Facilities Engineering will notify the Building Manager, Plant Protection, HS&E Area Engineer, Sewage Treatment Plant, Utility Area Manager, and RCRA/CERCLA Office of the date and building of the test 24 hours prior to the beginning of each test. In addition, Facilities Engineering will verbally notify the above offices 1 hour prior to actual dye injection.

If you have any questions or comments, please feel free to contact me at extension 5450 or digital pager 320.

D. W. Walker, Project Engineer  
Plant Utilities Engineering

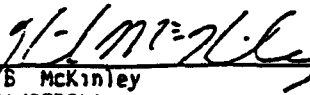
**DYE TESTING FOUNDATION FOOTING DRAINS**

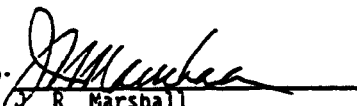
EG&G ROCKY FLATS PLANT	Manual Number:	5-21000-OPS
EM OPERATIONS	Procedure No:	SW.33, Rev 0
PROCEDURES MANUAL	Page:	PAGE 19 OF 22
	Effective Date:	9/29/92
CATEGORY 2	Organization:	SWD


**APPENDIX 7 (Continued)**  
**Tracer Dye Material Safety Data Sheet (MSDS)**


**TRACER DYE INJECTION TEST**

APPROVED:  9/4/92  
C. E. Beutler  
Facilities Engineering

APPROVED:   
K. B. McKinley  
RCRA/CERCLA

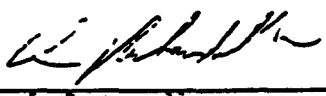
APPROVED:   
J. R. Marshall  
Plant Services

APPROVED:   
E. R. Young  
Plant Security

APPROVED:   
E. R. Naimon  
Waste Operations

APPROVED:   
G. W. Coles  
Utilities

APPROVED:   
J. D. McCarthy  
Nuclear/Industrial Safety

APPROVED:   
R. E. Richardella  
HS&E Engineering

**Distribution**

C. E. Beutler  
M. G. Colalancia  
G. W. Coles  
A. Eden  
D. W. Ferrera  
J. P. Koffer  
J. R. Marshall  
J. D. McCarthy  
K. B. McKinley  
E. R. Naimon  
R. E. Richardella  
V. Terkun  
E. R. Young

# DYE TESTING FOUNDATION FOOTING DRAINS

EG&G ROCKY FLATS PLANT	Manual Number:	5-21000-OPS
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	Effective Date:	9/29/92
CATEGORY 2	Organization:	SWD

## APPENDIX 7 (Continued) Tracer Dye Material Safety Data Sheet (MSDS)

### ROBERT KOCH INDUSTRIES INC.

ROUTE 1 BOX 444 BENNETT CO 20102 (303) 644 3753

#### MATERIAL SAFETY DATA SHEET

PRODUCT NAME FD&C Red #40 Color Index no: 16035

CHEMICAL NATURE: Food Red 17

% ACTIVITY 90 - 93%

#### - 1. PHYSICAL DATA -

BOILING POINT, 760 mm Hg	N/A	FREEZE POINT	N/A
SPECIFIC GRAVITY	N/A	VAPOR PRESSURE AT 20°C	N/A
VAPOR DENSITY	N/A	SOLUBILITY IN H <sub>2</sub> O	Approx 25%
PER CENT VOLATILES BY WEIGHT	N/A	IONIC NATURE	N/A
APPEARANCE AND COLOR	Red Granular - Odor none		

#### - 2. HAZARDOUS INGREDIENTS -

MATERIAL	%	MSD (Units)
FD&C colors are not hazardous material - so not fall under the jurisdiction of D.O.T.		

#### - 3. FIRE AND EXPLOSION HAZARD DATA -

FLASH POINT (test method)	N/A	AUTOIGNITION TEMPERATURE	N/A
FLAMMABLE LIMITS IN AIR, % by volume		LOWER	N/A
		UPPER	N/A
EXTINGUISHING MEDIA	Will not burn		
SPECIAL FIRE FIGHTING PROCEDURES	None		
USUAL FIRE AND EXPLOSION HAZARDS	None		

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# DYE TESTING FOUNDATION FOOTING DRAINS

EG&G ROCKY FLATS PLANT	Manual Number:	5-21000-OPS
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## APPENDIX 7 (Continued) Tracer Dye Material Safety Data Sheet (MSDS)

### - 4. HEALTH HAZARD DATA -

THRESHOLD LIMIT VALUE	None
EFFECTS OF OVEREXPOSURE	No effects.
EMERGENCY AND FIRST AID PROCEDURES	N/A

### - 5. REACTIVITY DATA -

STABILITY	CONDITIONS TO AVOID
UNSTABLE	
STABLE	
XXX	
INCOMPATIBILITY (materials to avoid)	Bleach Products
HAZARDOUS DECOMPOSITION PRODUCTS	None
HAZARDOUS POLYMERIZATION	CONDITION TO AVOID
May Occur Will Not Occur	
XXX	

### - 6. SPILL OR LEAK PROCEDURES -

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Will not burn - suggest sanitary landfill in accordance with local, state, and federal regulations
WASTE DISPOSAL METHOD	See above

### - 7. SPECIAL PROTECTION INFORMATION -

RESPIRATORY PROTECTION (Specify Type)	This product tends to be dusty. Ventilation or dust mask would be helpful, but not necessary
VENTILATION	LOCAL EXHAUST
	MECHANICAL
	XXX
	SPECIAL OTHER
PROTECTIVE GLOVES	Rubber
	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT	Color stains are aggravating but not hazardous. Any protection from dust is generally appreciated.

### - 8. SPECIAL PRECAUTIONS -

PRECAUTIONARY LABELING	None
OTHER HANDLING AND STORAGE CONDITIONS	Keep in closed containers.

**DYE TESTING FOUNDATION FOOTING DRAINS**

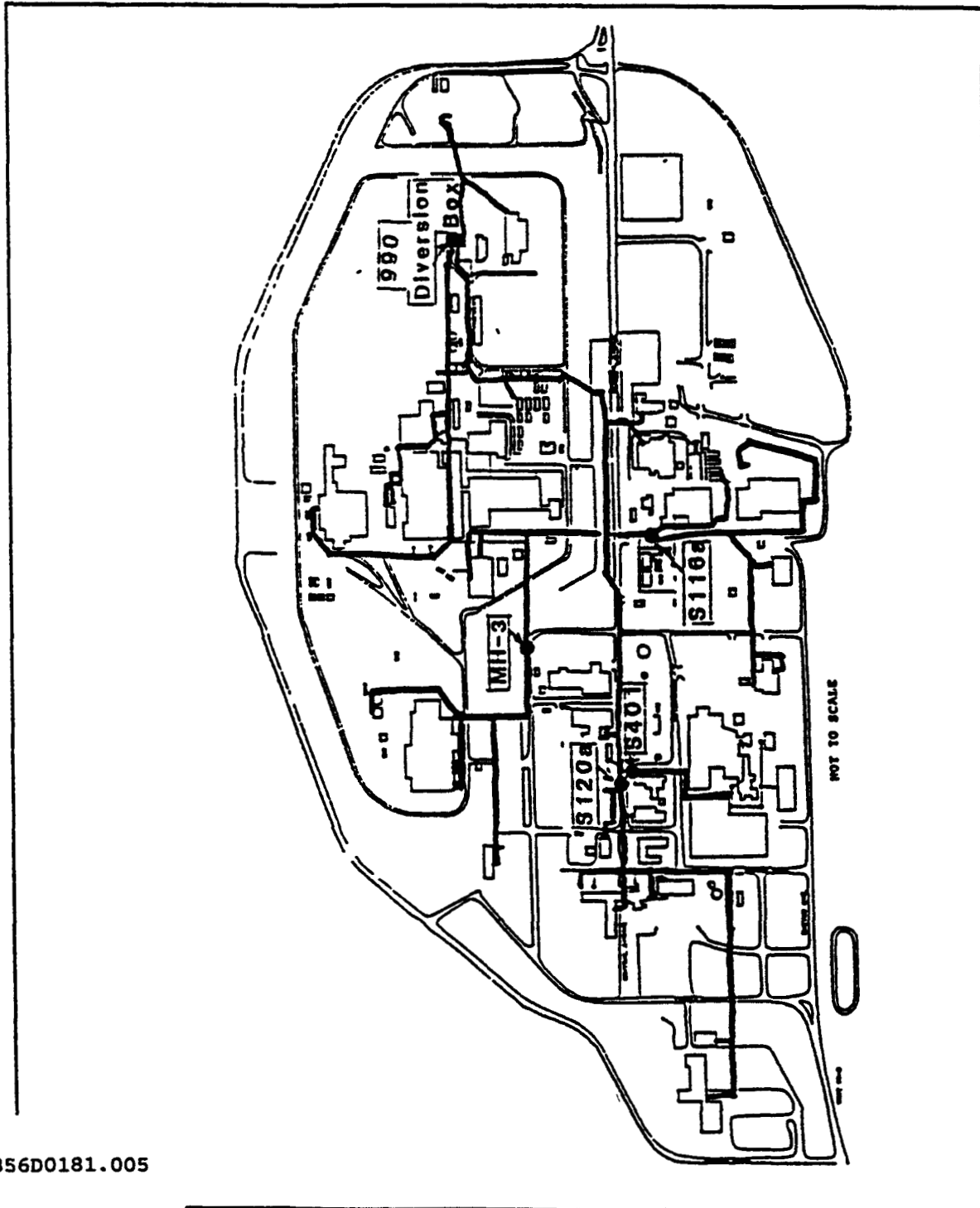
**EG&G ROCKY FLATS PLANT  
EM OPERATIONS  
PROCEDURES MANUAL**

**CATEGORY 2**

**Manual Number:  
Procedure No:  
Page:  
Effective Date:  
Organization:**

**5-21000-OPS  
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SWD**

**APPENDIX 7  
Location Map**



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